

Application No.: 10/813256
Amendment dated: February 23, 2006
Reply to Office action of January 18, 2006

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1(currently amended). A method of manufacturing a link plate for a roller chain, comprising the steps of:

intermittently forwarding a band of sheet steel along a path past a plurality of dies arranged in succession along the direction in which said band of sheet steel is forwarded, wherein at least one of said dies is a rough punching die, and at least one other one of said dies is a shaving die, said rough punching die and said shaving die being positioned symmetrically in relation to, and on opposite sides of, an intermediate position along said direction; punching said band of steel sheet by said rough punching die, thereby punching out a portion of said band to form an edge of a link plate; and shaving said edge of said link plate by said shaving die; wherein said band of steel sheet deviates laterally relative to a straight line extending along said direction and past the rough punching and shaving dies, a portion of said line extends past the rough punching die and is in the same relationship to the rough punching die as a portion of the line extending past the shaving die is to the shaving die, and the lateral deviation of said band of sheet steel from said straight line ~~reverses~~ reaches a

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maximum or minimum at a fixed location along said path substantially coinciding with said intermediate position;

whereby, in said shaving step, said shaving die is closely aligned with said edge of a link plate formed by said rough punching die.

2(original). A method according to claim 1, in which said rough punching die punches out portions of said band to form outer peripheral edges of a link plate, and said shaving die shaves the outer peripheral edges formed by said rough punching die.

3(original). A method according to claim 1, in which said edge formed in said punching step is an inner peripheral edge of a connecting pin hole in the link plate.

4(original). A method according to claim 1, in which said band of steel sheet is punched by a first punching die to form at least one connecting pin hole in a link plate, and by a second punching die to form at least one outer peripheral edge of the same link plate, said at least one connecting pin hole is shaved by a first shaving die, and said at least one outer peripheral edge of the same link plate is shaved by a second shaving die, and in which said first punching die and said first shaving die are symmetrically disposed relative to said intermediate position and on opposite sides thereof respectively, said second punching die and said second shaving die are also symmetrically disposed relative to said intermediate position and on opposite sides thereof respectively.

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5(original). A method according to claim 1, in which said rough punching die forms outer peripheral edges of a link plate and at least one connecting pin hole in said link plate in a single punching step, and in which said shaving die shaves said outer peripheral edges and an inner peripheral edge of said at least one connecting pin hole in a single shaving step.

6(new). A method of manufacturing a link plate for a roller chain, comprising the steps of:

intermittently forwarding a band of sheet steel along a path past a plurality of dies arranged in succession along the direction in which said band of sheet steel is forwarded, wherein at least one of said dies is a rough punching die, and at least one other one of said dies is a shaving die, said rough punching die and said shaving die being positioned symmetrically in relation to, and on opposite sides of, an intermediate position along said direction; punching said band of steel sheet by said rough punching die, thereby punching out a portion of said band to form an edge of a link plate;

aligning said shaving die closely with said edge of a link plate formed by said rough punching die; and shaving said edge of said link plate by said shaving die; in which said rough punching die forms outer peripheral edges of a link plate and at least one connecting pin hole in said link plate in a single punching step, and in which said shaving die shaves said outer peripheral edges and an inner peripheral edge

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of said at least one connecting pin hole in a single shaving step.